

REMARKS

The Office Action dated November 13, 2007 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-4, 6-12, and 14-20 are now pending in this application. Claims 1-4, 7, 12, and 14 stand rejected. Claims 1, 5, 8-13, 15, 16, and 18-20 stand objected to. Claims 5 and 13 have been canceled.

The objection to Claims 1, 5, 8, 11, 12, 15, 16, and 18 due to an informality is respectfully traversed. By the above amendment, Claims 1, 8, 11, 12, 15, 16, and 18 have been amended to replace "to be operable" with "operate." Claim 5 has been canceled.

For at least the reasons set forth above, Applicants request that the objection to Claims 1, 5, 8, 11, 12, 15, 16, and 18 be withdrawn.

The rejection of Claims 1, 3, 4, 12, and 14 under 35 U.S.C. § 103(a) as being unpatentable over Siemens (Non-Patent Literature) (hereinafter referred to as "Siemens") in view of U.S. Patent Application Publication No. 2003/0055900 to Glas et al. (hereinafter referred to as "Glas") and Schneider Electric (Non-Patent Literature) (hereinafter referred to as "Schneider Electric") is respectfully traversed.

Siemens describes industrial Ethernet equipment operating at up to 100 Mbps. The equipment allows the network to operate in full duplex mode, thereby increasing the network's nominal transmission rate and range. The switching capabilities of the equipment facilitate temporarily connecting several pairs of subnets simultaneously and further allow for filtering by the Media Access Control (MAC) address of each node so that local traffic is limited to the local network. The equipment also supports the use of a redundant optical ring structure, wherein multiple networks may be connected through a small number of intermediate switches. Notably, Siemens does not describe a switch configured to operate under an extended vibration of at least 2g (gravity).

Glas describes a network used by an automation system, wherein the network uses the Fast Ethernet Standard. The automation system includes a plurality of network subscribers, such as sensors (2) or pressure transducers, connected via a plurality of Ethernet controllers (28, 29, 30, and 31). The Ethernet controllers (28-31) support the Spanning Tree algorithm and virtual LAN (VLAN) configurations that are configured by the user.

Schneider Electric describes an Ethernet hub for use in industrial environments. The hub operates at up to 100 Mbps and allows connection of up to four data devices via twisted pair cables.

Claim 1 recites an Ethernet switch for use in a non-office environment. The Ethernet switch includes “a plurality of ports, said switch configured to operate within a temperature range of at least between approximately 0° C and approximately 60° C, said switch further configured to operate within a non-condensing humidity range of at least between approximately 10% and approximately 95%, said switch further configured to operate under an extended vibration of at least 2g (gravity), said switch further configured to support at least one of a Virtual Local Area Network (VLAN), a Quality of Service (QoS), a Remote Monitoring (RMON), and a Spanning Tree, wherein said switch automatically configures the VLAN by operating within the temperature range, and wherein said switch is further configured to transfer data between a plurality of devices.”

None of Siemens, Glas, and Schneider Electric, considered alone or in combination, describes or suggests an Ethernet switch, as recited in Claim 1. More specifically, none of Siemens, Glas, and Schneider Electric, considered alone or in combination, describes or suggests a switch configured to operate under an extended vibration of at least 2g (gravity). Rather, in contrast to the present invention, Siemens describes industrial Ethernet switching equipment that allows multiple networks or subnets to be connected through a redundant optical ring structure, Glas describes a network used by an automation system, wherein the network includes a number of Ethernet switches that support Spanning Trees and user-configured VLANs, and Schneider Electric describes an Ethernet hub that can connect up to four devices within an industrial environment.

Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Siemens in view of Glas and Schneider Electric.

Claims 3 and 4 depend from independent Claim 1. When the recitations of Claims 3 and 4 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 3 and 4 likewise are patentable over Siemens in view of Glas and Schneider Electric.

Claim 12 recites an Ethernet network including “a first switch configured to be used in a non-office environment; a second switch operationally coupled to said first switch, said second switch and said first switch configured to cooperatively operate as one combined switch; and a plurality of user devices operationally coupled to said first combined switch such that said combined switch transfers data from at least one of said plurality of user devices to a different one of said plurality of user devices, said first switch and said second switch configured to: operate within a temperature range of at least between approximately 0° C and approximately 60°C; operate within a non-condensing humidity range of at least between approximately 10% and approximately 95%; and support at least one of a Virtual Local Area Network (VLAN), a Quality of Service (QoS), a Remote Monitoring (RMON), and a Spanning Tree, wherein said combined switch automatically configures the VLAN by operating within the temperature range.”

None of Siemens, Glas, and Schneider Electric, considered alone or in combination, describes or suggests an Ethernet network, as recited in Claim 12. More specifically, none of Siemens, Glas, and Schneider Electric, considered alone or in combination, describes or suggests a first switch and a second switch operationally coupled to the first switch, such that the second switch and the first switch cooperatively operate as one combined switch. Rather, in contrast to the present invention, Siemens describes industrial Ethernet switching equipment that allows multiple networks or subnets to be connected through a redundant optical ring structure, Glas describes a network used by an automation system, wherein the network includes a number of Ethernet switches that support Spanning Trees and user-configured VLANs, and Schneider Electric describes an Ethernet hub that can connect up to four devices within an industrial environment.

Accordingly, for at least the reasons set forth above, Claim 12 is submitted to be patentable over Siemens in view of Glas and Schneider Electric.

Claim 14 depends from independent Claim 12. When the recitations of Claim 14 are considered in combination with the recitations of Claim 12, Applicants submit that dependent Claim 14 likewise is patentable over Siemens in view of Glas and Schneider Electric.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 1, 3, 4, 12, and 14 be withdrawn.

The rejection of Claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Siemens in view of Glas and Schneider Electric, and further in view of U.S. Patent 6,980,547 to Gally, et al. (hereinafter referred to as “Gally”) is respectfully traversed.

Siemens, Glas, and Schneider Electric are described above.

Gally describes a remote switching system (100) to monitor and control network traffic using source port address mapping. The system (100) includes a switching chip (120) that may be Application Specific Integrated Circuits (ASICs) or may be implemented via software. Each switching chip (120) includes a Media Access Control (MAC) address lookup database that allows the switching chip (120) to look up previously obtained MAC addresses and to forward packets or frames to the MAC addresses. The MAC lookup database may also update MAC addresses and store new MAC addresses. Storing new and updating previously obtained MAC addresses allows the switching system to control the route and priority of the packets or frames being transmitted in order to obtain more efficiency.

Claim 1 recites an Ethernet switch for use in a non-office environment. The Ethernet switch includes “a plurality of ports, said switch configured to operate within a temperature range of at least between approximately 0° C and approximately 60° C, said switch further configured to operate within a non-condensing humidity range of at least between approximately 10% and approximately 95%, said switch further configured to operate under an extended vibration of at least 2g (gravity), said switch further configured to support at

least one of a Virtual Local Area Network (VLAN), a Quality of Service (QoS), a Remote Monitoring (RMON), and a Spanning Tree, wherein said switch automatically configures the VLAN by operating within the temperature range, and wherein said switch is further configured to transfer data between a plurality of devices.”

None of Siemens, Glas, Schneider Electric, and Gally, considered alone or in combination, describes or suggests an Ethernet switch, as recited in Claim 1. More specifically, none of Siemens, Glas, Schneider Electric, and Gally, considered alone or in combination, describes or suggests a switch configured to operate under an extended vibration of at least 2g (gravity). Rather, in contrast to the present invention, Siemens describes industrial Ethernet switching equipment that allows multiple networks or subnets to be connected through a redundant optical ring structure, Glas describes a network used by an automation system, wherein the network includes a number of Ethernet switches that support Spanning Trees and user-configured VLANs, Schneider Electric describes an Ethernet hub that can connect up to four devices within an industrial environment, and Gally describes a remote switching system to monitor and control network traffic using source port address mapping based on the MAC address of each device on the network.

Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Siemens in view of Glas and Schneider Electric, and further in view of Gally.

Claim 2 depends from independent Claim 1. When the recitations of Claim 2 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claim 2 likewise is patentable over Siemens in view of Glas and Schneider Electric, and further in view of Gally.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claim 2 be withdrawn.

The rejection of Claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Siemens in view of Glas and Schneider Electric, and further in view of Hirschmann (Non-Patent Literature) (hereinafter referred to as “Hirschmann”) is respectfully traversed.

Siemens, Glas, and Schneider Electric are described above.

Hirschmann describes an autosensing Ethernet hub that includes SNMP management to monitor network traffic and implement security.

Claim 1 recites an Ethernet switch for use in a non-office environment. The Ethernet switch includes “a plurality of ports, said switch configured to operate within a temperature range of at least between approximately 0° C and approximately 60° C, said switch further configured to operate within a non-condensing humidity range of at least between approximately 10% and approximately 95%, said switch further configured to operate under an extended vibration of at least 2g (gravity), said switch further configured to support at least one of a Virtual Local Area Network (VLAN), a Quality of Service (QoS), a Remote Monitoring (RMON), and a Spanning Tree, wherein said switch automatically configures the VLAN by operating within the temperature range, and wherein said switch is further configured to transfer data between a plurality of devices.”

None of Siemens, Glas, Schneider Electric, and Hirschmann, considered alone or in combination, describes or suggests an Ethernet switch, as recited in Claim 1. More specifically, none of Siemens, Glas, Schneider Electric, and Hirschmann, considered alone or in combination, describes or suggests a switch configured to operate under an extended vibration of at least 2g (gravity). Rather, in contrast to the present invention, Siemens describes industrial Ethernet switching equipment that allows multiple networks or subnets to be connected through a redundant optical ring structure, Glas describes a network used by an automation system, wherein the network includes a number of Ethernet switches that support Spanning Trees and user-configured VLANs, Schneider Electric describes an Ethernet hub that can connect up to four devices within an industrial environment, and Hirschmann describes an autosensing Ethernet hub that includes SNMP management to monitor network traffic and implement security.

Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Siemens in view of Glas and Schneider Electric, and further in view of Hirschmann.

Claim 7 depends from independent Claim 1. When the recitations of Claim 7 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claim 7 likewise is patentable over Siemens in view of Glas and Schneider Electric, and further in view of Hirschmann.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claim 7 be withdrawn.

Claims 5, 6, 8-10, 13, 15, 16, and 18-20 were objected to as being dependent upon a rejected base claim, but were indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 5 has been canceled. Claims 6 and 8-10 depend, directly or indirectly, from independent Claim 1, which Applicants respectfully submit is patentable over the cited art. When the recitations of Claims 6 and 8-10 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 6 and 8-10 likewise are patentable over the cited art.

Claim 13 has been canceled. Claims 15, 16, and 18-20 depend, directly or indirectly, from independent Claim 12, which Applicants respectfully submit is patentable over the cited art. When the recitations of Claims 15, 16, and 18-20 are considered in combination with the recitations of Claim 12, Applicants submit that dependent Claims 15, 16, and 18-20 likewise are patentable over the cited art.

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In view of the foregoing amendment and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully submitted,



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